

We claim:

1. An electric vehicle, comprising:
10 one or more electric motors and/or generators,
wherein at least one motor and/or generator is an adaptive electric machine
comprising two or more electromagnetic circuits that are sufficiently isolated to
substantially eliminate electromagnetic and electrical interference between the circuits.
- 15 2. The electric car or other electric vehicle of claim 1 which has an internal
combustion engine, steam engine, or turbine engine connected to an electric generator
and arranged in a series hybrid configuration with the one or more electric motors.
- 20 3. The electric car or other electric vehicle of claim 1 which has a fuel cell
arranged in a series hybrid configuration with the one or more electric motors.
4. The electric car or other electric vehicle of claim 1 which has an internal
combustion engine, steam engine, or turbine engine arranged in a parallel series hybrid
configuration with the one or more electric motors.

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5. An electric car or other electric vehicle with one or more electric motors to move the vehicle,

where the torque/speed/efficiency characteristics of at least one electric motor can be dynamically adapted to varying torque, speed, acceleration, braking and other
10 operating conditions of the vehicle to optimize vehicle performance.

6. The electric car or other electric vehicle of claim 5 which has an internal combustion engine, steam engine, or turbine engine arranged in a series or parallel hybrid configuration with the one or more electric motors.

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7. The electric car or other electric vehicle of claim 5 which has an internal combustion engine, steam engine, or turbine engine connected to an electric generator arranged in a series hybrid configuration with the one or more electric motors.

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8. An electric car or other electric vehicle with an in-wheel electric motor in at least one wheel of the vehicle including vehicles with a motor at each wheel of the vehicle, each motor with its own motor controller and power electronics.

5 9. The electric car or other electric vehicle of claim 8 with a separate battery
for each electric motor.

10 10. The electric car or other electric vehicle of claim 8 with:
a separate battery for each electric motor,
10 a gasoline engine, steam engine, or turbine engine /generator module to produce
electrical power to charge the batteries,
a user interface to get input from the driver of the vehicle, and
a central controller that controls operation of the motors, batteries, and gasoline
engine, steam engine, or turbine engine /generator module.

15 11. A method of propelling a car or other vehicle with one or more electric
motors, the steps including:
periodically sensing one or more driver inputs, sensor inputs (for each motor
system) and/or sensor inputs (for vehicle), and
20 allowing the torque/speed/efficiency characteristics of at least one motor to be
dynamically adapted to changes in the one or more inputs and/or sensor inputs.